

Docker Astra Linux 1.7

- Docker
- Docker
 - Docker
 - , Docker
 - Docker
 - , Docker (rootless)
-
- - chroot-
 -
- Docker-
-

docker . docker Astra Linux Special Edition 1.7.

 (hardened) , hardened user_namespaces (CONFIG_USER_NS), .

..:

- Docker;
- Docker- Astra Linux Special Edition?;
- Docker .

Docker

Docker Astra Linux Special Edition .10015-01/.10015-10 (1.7) :

- - docker ;
- (rootless) - docker . :
 - ;
 - ;

Docker

Docker

Astra Linux Special Edition .10015-01 (1.7) Docker [docker.io](#) [synaptic](#) :

```
sudo apt install docker.io
```

, (-). Docker sudo. docker:

```
sudo usermod -aG docker $USER
```

docker , docker.

. (,):

```
exec su - $USER
```

, :

```
export DISPLAY=:0 HOME=/home/$USER HOSTNAME=`hostname`
```

, Docker

, , Docker, :

1. /etc/default/grub GRUB_CMDLINE_LINUX_DEFAULT :



:

- Astra Linux Special Edition .10015-01 (1.7) [2022-1110SE17 \(1.7.3\)](#), .10015-10, .10015-17
- Astra Linux Special Edition .10015-37 (7.7)

Astra Linux . : [docker](#) [Linux 1.6](#) [2.12](#)

```
cgroup_enable=memory swapaccount=1
```

:

```
GRUB_CMDLINE_LINUX_DEFAULT="parsec.max_ilev=63 quiet net.ifnames=0 libata.force=noncq net.ifnames=0  
cgroup_enable=memory swapaccount=1"
```

2. :

```
sudo update-grub
```

3. .

--memory, :

```
sudo docker run -it --memory 100m alpine /bin/sh
```

Docker

Astra Linux Special Edition Docker 2 (, Virtualization). , , . Docker :

```
sudo astra-docker-isolation enable  
sudo systemctl restart docker
```

Docker :

```
sudo astra-docker-isolation disable  
sudo systemctl restart docker
```

, Docker (rootless)

 . Astra Linux, Docker 20.10 . hardened .

Docker rootless rootless-helper-astra:

```
sudo apt install rootless-helper-astra
```

docker.io, .

Docker , Docker rootless :

```
sudo systemctl start rootless-docker@<_>@<_>
```

<_>- , , , 0:0:0:0. . , .

, :

```
sudo systemctl enable rootless-docker@<_>@<_>
```

Docker rootlessenv. , , Docker . rootlessenv Docker, . , , :

```
sudo tar -C /var/docker-chroot -cpf - . | rootlessenv docker import - wiki  
/astralinux:se --change "ENV PATH /usr/local/sbin:/usr/local/bin:/usr/sbin:  
/usr/bin:/sbin:/bin" --change 'CMD ["/bin/bash"]'
```

, [Astra Linux Docker](#), `rootlessenv docker import`.

```
rootlessenv docker images
```

, , :

```
rootlessenv docker run --rm -ti astralinux:se
```

. . rootlessenv sudo.



Astra Linux Special Edition .

1. Astra Linux Special Edition x.7 `docker-registry` (. [Astra Linux Special Edition x.7](#): ,) :

```
sudo apt install docker-registry
```

`docker-registry.service`, . , ;

2. Astra Linux `docker docker-`, " Docker". Docker- " Docker" Docker:

```
rootless docker run -d -p 5000:5000 --restart=always --name registry
registry:2
```

```
Unable to find image 'registry:2' locally
2: Pulling from library/registry
0a6724ff3fcd: Pull complete
d550a247d74f: Pull complete
1a938458ca36: Pull complete
acd758c36fc9: Pull complete
9af6d68b484a: Pull complete
Digest: sha256:
d5459fcb27aecc752520df4b492b08358a1912fcdfa454f7d2101d4b09991daa
Status: Downloaded newer image for registry:2
782dbf275b4521715930a5478c3af2ed3e77614fc6042d03fff9a27740fafd97
```

. . :

- a. :

```
rootless docker container stop registry
```

- b. :

```
rootless docker container stop registry && sudo docker container
rm -v registry
```

chroot-

. [Astra Linux Docker](#).

man:

```
man dockerfile
man docker-build
```

, () "" , . docker build , . . (PATH) (URL) Git. Dockerfile, .
docker build () dockerd, dockerd , , .



, , . , . (WORKDIR). "" , .. , :

```
RUN cd /home ; pwd
RUN pwd
```

pwd /home, pwd , .

docker build. wiki/astralinux:se (. [Astra Linux](#) [Docker](#)). :

1. :

```
mkdir build-user
echo " " > build-user/data-to-import
```

.. data-to-import " "().

2. build-user/Dockerfile :

```
#
FROM wiki/astralinux:se
# data-to-import
COPY data-to-import /srv
# /srv/created-file
RUN touch /srv/created-file
#
RUN cat /srv/data-to-import
#
RUN echo Current work directory is $(pwd)
```

3. test:

```
rootlessenv docker build -t test build-user/
```

```
-----
Sending build context to Docker daemon   5.12kB
Step 1/5 : FROM wiki/astralinux:orel
---> 60d0611fe56a
Step 2/5 : COPY /data-to-import /srv
---> 7a75a002d29f
Step 3/5 : RUN touch /srv/created-file
---> Running in 709bb54af8c3
Removing intermediate container 709bb54af8c3
---> b5fd28178901
Step 4/5 : RUN cat /srv/data-to-import
---> Running in 4c69f455cf2f

Removing intermediate container 4c69f455cf2f
---> c8f8c7c3797a
```

```
Step 5/5 : RUN echo Current work directory is $(pwd)
---> Running in 27db5fcaaba5
Current work directory is /
Removing intermediate container 27db5fcaaba5
---> 14446097a09e
Successfully built 14446097a09e
Successfully tagged test:latest
```

4 , 5 ;

4. , test :

```
rootlessenv docker images
```

REPOSITORY	TAG	IMAGE	
ID	CREATED	SIZE	
test	latest	14446097a09e	2 minutes
ago	290MB		
wiki/astralinux	orel	60d0611fe56a	About an
hour ago	290MB		
busybox	latest	b97242f89c8a	7 days
ago	1.23MB		

5. :

```
rootlessenv docker run --rm -it test
```

```
root@978a4cc9fbd8:/# ls -l /srv
total 4
-rw-r--r-- 1 root root 0 Jan 20 10:12 created-file
-rw-r--r-- 1 root root 51 Jan 20 10:11 data-to-import
root@978a4cc9fbd8:/# cat /srv/data-to-import

root@978a4cc9fbd8:/# exit
exit
```

/srv data-to-import " " created-file.

Docker-

Docker : <https://docs.docker.com/engine/reference/commandline/docker/>.

```
docker help
```

--help, man, :

```
docker attach --help
man docker-attach
```

():

docker attach	- (stdin, stdout, stderr)
docker build	Docker- Docker-
docker builder	Docker-

docker commit	Docker-										
docker config	Docker										
docker container	: <table> <tr> <td>docker container create</td><td></td></tr> <tr> <td>docker container exec</td><td></td></tr> <tr> <td>docker container run</td><td></td></tr> <tr> <td>docker container start</td><td>()</td></tr> <tr> <td>docker container stop</td><td></td></tr> </table>	docker container create		docker container exec		docker container run		docker container start	()	docker container stop	
docker container create											
docker container exec											
docker container run											
docker container start	()										
docker container stop											
docker context	Docker										
docker cp											
docker create											
docker diff	,										
docker events	, Docker										
docker exec											
docker export	tar										
docker history											
docker image	: <table> <tr> <td>docker image build</td><td></td></tr> </table>	docker image build									
docker image build											
docker images											
docker import											
docker info											
docker inspect	Docker										
docker kill	()										
docker load	tar										
docker login											
docker logout											
docker logs											
docker manifest	Docker										
docker network											
docker node	Docker										
docker pause	()										
docker plugin											
docker port											
docker ps											
docker pull											
docker push											
docker rename											
docker restart	()										
docker rm	()										
docker rmi	()										

docker run	, : , , docker run --rm () , ..
docker save	() tar ()
docker search	Docker
docker secret	Docker
docker service	Docker
docker stack	
docker start	()
docker stats	
docker stop	()
docker swarm	Docker
docker system	Docker
docker tag	() ,
docker top	
docker trust	
docker unpause	()
docker update	()
docker version	Docker
docker volume	
docker wait	()



Astra Linux Special Edition

:

```
sudo docker image ls
```

REPOSITORY	CREATED	TAG	SIZE	IMAGE	
wiki/astralinux		se17rc5		5d69ce8720a7	25
hours ago	318MB				
registry		2		678dfa38fcfa	12
days ago	26.2MB				
localhost:5000/hello-world-se		latest		bf756fb1ae65	12
months ago	13.3kB				
hello-world		latest		bf756fb1ae65	12
months ago	13.3kB				

(tag) :

```
sudo docker tag wiki/astralinux:se17rc5 localhost:5000/se17rc5
```

.. :

```
sudo docker image ls
```

REPOSITORY		TAG	IMAGE	
ID	CREATED	SIZE		
wiki/astralinux		se17rc5	5d69ce8720a7	25
hours ago	318MB			
localhost:5000/se17rc5		latest	5d69ce8720a7	25
hours ago	318MB			
registry		2	678dfa38fcfa	12
days ago	26.2MB			
localhost:5000/hello-world-se		latest	bf756fb1ae65	12
months ago	13.3kB			
hello-world		latest	bf756fb1ae65	12
months ago	13.3kB			

(5d69ce8720a7). - wiki/astralinux localhost:5000.

:

```
sudo docker push localhost:5000/se17rc5
```

The push refers to repository [localhost:5000/se17rc5]
d5f516170dbe: Pushed
latest: digest: sha256:
8d12b1c9ebe3b3060734965bbd7214a0063633261bf1da17d3caf50ed4f1f534 size: 529